



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,412	02/12/2004	Philip D. Nguyen	2002-IP-006415U1P1D1	4317
71407	7590	12/19/2008	EXAMINER	
ROBERT A. KENT P.O. BOX 1431 DUNCAN, OK 73536			METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			12/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ROBERT.KENT1@HALLIBURTON.COM
Tammy.Knight@Halliburton.com

Office Action Summary	Application No.	Applicant(s)	
	10/777,412	NGUYEN ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 Sept. & 13 Oct. 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,29,31,37 and 44-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,29,31,37 and 44-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/13/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 21, 29, 31, 37 and 44-48 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 September 2008 has been entered.

Information Disclosure Statement

2. The information disclosure statement filed 13 October 2008 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the International Search Reports and Opinions on page 7 of the IDS are improperly cited and do not include a proper publication date and a place of publication.

The remaining references in the above denoted IDS that have not been considered were not considered for one of the following reasons:

- (1) reference previously cited and is already of record,
- (2) the reference does not correspond to the foreign document presented and is thus not properly cited and the cited document was not provided, and
- (3) the document does not appear to be relevant to the invention and applicants have not set forth any relevance for the approximately 145 documents in the IDS.

It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Election/Restrictions

3. Applicant's election without traverse of metal salts as the tracking chemical in the reply filed on 10/24/06 is acknowledged. Claims 21, 29, 31, 37 and 44-48 read on the elected species.

The election was noted as a specific salt or a specific organic compound. As an organic salt is an organic compound and applicants have elected metal salts, organic compounds, i.e., organic salts are withdrawn as non-elected species.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21, 29, 31, 37 and 44-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 21 and 44 characterize phosphorous as a metal.
Phosphorous is a non-metal as classically understood.

Applicants' alternative grouping in claims 21 and 44 are indefinite since the groupings employ the phrase; "selected from the group consisting of", and employ the conjunction "and" multiple times in the listing. See MPEP 2173.05(h). The claim may have multiple interpretations including a single salt or the requirement of two salts together. To the extent applicants intent is to claim the combination of two or more salts together, applicants should point out basis therefore in the original specification.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1796

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 44 and 46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Anderson, II et al, US 5,849,590. See column 3, lines 28-35; column 7, lines 45-53; column 8, lines 9-67, particularly lines 12, 14, 20, 21 and 49-67; and column 9, lines 32-37. Anderson, II et al clearly envisages the coating of particulates with a tag comprising salts of Ni, Mo, Cs, Ag and Au. Said disclosure reads on applicants claims. The preamble has been given no patentable weight as directed to an intended use of the compositions.

To the extent the Anderson, II et al reference differs in the disclosure of the tag coated particulate with sufficient specificity, it would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ known rare metal salts as taught in the Anderson, II et al reference for the advantageous tagging function as clearly contemplated therein.

Art Unit: 1796

10. Claims 21, 29, 44-45 and 47 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dewprashad, US 5,420,174.

Dewprashad (column 1, lines 26 et seq; and claims) discloses it is common in the treatment of formations to coat or encapsulate proppants with natural or synthetic film-forming materials. Dewprashad further discloses the resin coated proppant **in aqueous gelled fluids** formed by cross-linking rheological agents with conventional cross-linkers comprising aluminum and titanium cross-linking agents. These are conventionally in the form of soluble salts.

Dewprashad (column 2, lines 16 et seq; and claims 5 and 8) discloses oxidizing metal salts may be incorporated as gel breakers in the form of lithium hypochlorite.

The resin coated proppant would be further **gel coated** with a metal salt cross-linked gel and further including the gel breaker as lithium hypochlorite salt. Applicants do not distinguish the intended use. The use as a proppant with tracking material does not distinguish the proppant with the oxidizing salt as a gel breaker (In re Pearson 181 USPQ 641).

To the extent the Dewprashad reference differs in the disclosure of the gel breaker with sufficient specificity, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ known lithium oxidizing salts of among the other salts as gel breakers taught in the Dewprashad reference for the advantageous Dewprashad taught gel breaking function as clearly contemplated therein.

Art Unit: 1796

11. Claims 21, 29, 31, 37 and 44-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Borden Chemical, Inc. (hereafter Borden), WO 00/0502. Borden (abstract; page 6, lines 3-16; page 7, line 1 et seq; page 13, lines 7-13; and at least claims 1 and 16) disclose composite proppants including a resole resin binder as a coating on the formed particle employing as catalyst the salts of divalent metals including nickel and zinc, e.g., zinc acetate.

To the extent the Borden reference differs in the disclosure of the resole catalyst with sufficient specificity, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ known nickel salts of among the other salts as resole catalyst taught in the Borden reference for the advantageous Borden taught catalyst function as clearly contemplated therein.

12. Claims 21, 29, 31, 37 and 44-48 are rejected under 35 U.S.C. 103(a) as obvious over Armbruster, US 4,785,884, in view of Armbruster et al, US 4,677,187.

Armbruster '884 (abstract; column 1, lines 9 et seq; column 3, lines 35 et seq; particularly lines 58-60; column 5, lines 8-24; examples and claims) disclose the coating of proppants with resol resin employing catalyst salts at up to 10 % by weight including at least phosphorous salts of ammonium or amines among others and furfuryl alcohol.

Armbruster '884 reference differs in the disclosure of the catalyst salt including the claimed species.

Armbruster et al '187 discloses resole polymers employing furfuryl alcohol. Armbruster et al '187 (column 1, lines 49-54) teaches catalyst include Nickel. Armbruster et al '187 characterizes the catalyst activity from the metal ion, suggesting any anion may be employed. Armbruster et al '187 exemplifies acetates.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ known acid salts of Ni among other salts as catalyst taught in the Armbruster et al '187 reference for the advantageous catalytic function taught and as clearly contemplated.

Response to Arguments

13. Applicant's arguments filed 09 September 2008 have been fully considered but they are not persuasive.

14. Applicants assert the Dewprashad reference does not disclose a particulate coated with a tracking materials and a resin. This has not been deemed persuasive. Applicants' state: "Dewprashad discloses that proppant may be coated with a resole-type phenolic resin, placed in a gelled fluid" (emphasis added). More specifically, applicants do not define the degree, thickness or type of the coating *per se*. Applicants admit the proppants are coated with resin and in a gel. Said gels are cross-linked with titanium or aluminum. The gels include an oxidizing gel breaker, Which arte disclosed and claimed as including a lithium salt. Lithium salts are inherent to the formation of the gels and read on the claims.

15. Applicants' arguments regarding Armbruster have been addressed in the above rejection.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1796**

DSM